Remarks

This Amendment is filed in reply to the Office Action mailed 10/17/2003. A three-month extension of time and request for continuing examination (RCE) are filed concurrently herewith. Reconsideration of the present application in view of the foregoing amendments and following remarks is respectfully requested.

Claims 59-77 were pending in the application. Claims 62, 65, 70, and 73-76 have been cancelled without prejudice or disclaimer. Claims 59-61, 63, 66-69 and 71 have been amended. No new matter has been introduced. Claims 78-86 have been added. Thus, claims 59-61, 63, 64, 66-69, 71, 72, and 77-86 are submitted for reconsideration at this time. Favorable reconsideration of claims 59-61, 63, 64, 66-69, 71, 72, and 77-86 is respectfully solicited.

Double Patenting Rejection

Claims 59-77 stand rejected under the judicially created doctrine of double patenting over claims in U.S. Patent Nos. 6,542,585; 6,236,718; 6,236,718; 6,185,284; 6,181,783; 5,949,473; 5,929,896; 5,844,596; and 5,010,399. Applicant requests that the submission of a terminal disclaimer be held in abeyance until the allowance of claims in the application.

Objection Under 37 C.F.R. 1.75(c)

Claims 62-71 and 76 are objected to as being in improper form because a multiple dependent claim should refer to other claims in the alternative only. Applicant has amended the claims to remove all instances of multiple dependency. Withdrawal of the objection under 37 C.F.R. 1.75(c) is solicited.

Rejections Under 35 U.S.C. §112, ¶1

Claims 59-77 stand rejected under 35 U.S.C. §112, ¶1 as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention.

Claim 59

In regards to claim 59, the specification allegedly fails to contain written description to provide support for:

(1) "the energy ... within a plurality of substantially non-overlapping sub-band";

Applicant respectfully disagrees, and directs the Examiner's attention to Fig. 1 and cols. 6:65-7:2; 27:26-43. Applicant provides citations to the specification in issued U.S. Patent No. 5,010,399 ("'the '399 patent" hereafter), parent to the present application, and having a substantially identical specification. As shown in Fig. 1, at least three electrical signals are disclosed:

(1) a first electrical signal comprising a VIDEO signal;
(2) a second electrical signal comprising a CONTROL signal; and
(3) a third electrical signal comprising a VOICE signal.

The specification also discloses that the first electrical signal (i.e., the VIDEO signal) may be transmitted over a plurality of non-overlapping frequencies. Specifically, Applicant directs the Examiner's attention to cols. 6:65-7:2 and col. 27:26-43, which states:

> "3) The number of sources that can be active at once will depend on many different factors, but will always be greater than one. The signals from each active source occupy different, non-overlapping frequency bands while transmitting across the wiring." ('399 spec. cols. 6:65-7:2) (emphasis added)

> "a) One can choose a frequency band that is less likely to be used by many transmitters operating at high power near residential areas. This strategy requires a survey of frequency allocations and broadcasting patterns. Preliminary investigation by the inventors revealed that amateur radio is allocated narrow bands at 7 Mhz, 14 Mhz, 21 Mhz, and 28 Mhz, conveniently leaving gaps of 7 Mhz--just right for video.
>
> b) The video source transceiver can simultaneously transmit its signal over two frequency bands, and the signal that encounters less interference can be chosen, at the television end, to provide the picture.
>
> In the case of the cooperating transceiver pair, the video source transceiver simultaneously transmits the same signal over two different and non-overlapping channels below VHF channel 2." ('399 spec. cols. 27:26-43) (emphasis added)

One having ordinary skill in the art would recognize that the terms channel and frequency band correspond to one another. Accordingly, applicant provides "adequate support for "the energy ... within a plurality of substantially non-overlapping sub-band" in the disclosure explicitly and implicitly.

Again in regards to claim 59, the specification also allegedly fails to contain written description to provide support for:

(2) "simultaneously with said reception"; and
(3) "simultaneously with said applying of said first electrical signal"

In order to further prosecution of the present application, Applicant has amended claim 59 to more closely conform with the explicit language provided in the specification. The specification discloses that the first electrical signal (i.e., the VIDEO signal) may be applied simultaneously with the reception of the second electrical signal (i.e., the CONTROL signal). Applicant directs the Examiner's attention to col. 14, lines 60-64 (emphasis added), which states:

> "(4) transmitting this signal on to the telephone network without disturbing low frequency communication signals, simultaneously recovering the control signals fed to the wiring by the transceiver connected to the television."

Finally, the specification discloses that the third electrical signal (i.e., the VOICE signal) may be transmitted/received simultaneously with applying of the first electrical signal (i.e., the VIDEO signal). Applicant directs the Examiner's attention to col. 7, lines 17-21; col. 15, lines 1-3; and col. 17, lines 59-64, which are stated below:

> "(7) All of the capabilities described above are provided by simple connection of the transceivers. No other effort on the part of the user is required." ('399 spec. 7:22-24) (emphasis added)
>
> "(7) connecting to a telephone jack while allowing for telephone devices to share the same jack without loading down the energy of the video signal." ('399 spec. 15:1-3) (emphasis added)
>
> "Blocking low-frequency signals from transmission to the electronics of the transceiver prevents any interference with ordinary telephone communication signals. The blocking should render the connection and operation of the transceiver totally transparent to the functioning of low frequency telephone communications." ('399 spec. 17:59-64) (emphasis added)

In view of the amendments and the noted sections in the specification, Applicant respectfully submits that claim 59 is fully supported by the as-filed specification. Withdrawal of the rejection of claim 59 under 35 U.S.C. §112, ¶1 is solicited.

Claim 60

In regards to claim 60, the specification allegedly fails to contain written description to provide support for "expressing ... where the energy of said second electrical signal is concentrated within said low frequency band." In order to further prosecution of the present application, Applicant has amended claim 60 to more closely conform with the explicit language provided in the specification.

Further, as similarly noted above with respect to claim 59, the embodiment shown in Figure 1 discloses a second electrical signal comprising a control signal. The specification further discloses that the energy of the second electrical signal (i.e., the CONTROL signal) is concentrated within the second channel. Applicant directs the Examiner's attention to col. 14, lines 23-35 (emphasis added), which states:

> "Other requirements for the choice of a frequency band and energy level for transmission of these signals are that the band must not overlap, of course, the video signals at the frequencies chosen for video transmission, and the energy must meet the legal requirements that govern devices that connect to the public telephone network. As mentioned earlier, the U.S. Federal Communications Commission imposes no restrictions on signals above 6 Mhz. leaving ample room between that frequency and the video signals. even if a channel below VHF2 is used. The control signals can also be transmitted above the frequencies used for transmission of video."

As these frequency bands do not overlap, the energy is thus contained within a given band (corresponding to a channel). Hence, Applicant respectfully submits that claim 60 is fully supported by the as-filed specification. Withdrawal of the rejection of claim 60 under 35 U.S.C. §112, ¶1 is solicited.

Claims 65, 73-75

In regards to claims 65 and 73-75, the specification allegedly does not contain sufficient written description to support the various claimed percentages. Applicant has canceled claims 65 and 73-75 without prejudice or disclaimer. Withdrawal of the rejection of claims 65 and 73-75 is solicited.

Claim 69

In regards to claim 69 the specification allegedly fails to contain written description to provide support for the limitation "a control signal that has an influence on the content of said first information." However, the Office Action correctly acknowledges that the specification discloses a control signal for changing a channel in a video source. Changing a channel influences the content of the Video signal - as such, this claim *is* supported for at least the reasons expressly acknowledged by the Office Action. Withdrawal of the rejection of claim 69 under 35 U.S.C. §112, ¶1 is solicited.

Claim 71

In regards to claim 71, the specification allegedly fails to contain written description to provide support for the limitation recited therein. Applicant respectfully disagrees, and directs the Examiner's attention to col. 14, lines 16-23 and col. 27, lines 26-34, which state:

> "Because the bandwidth of control signals from typical infrared transmitters is considerably less than 1 Mhz finding a frequency interval that will encounter little interference from ambient broadcast signals is not difficult. Also, the information content is small so that little energy is required for successful transmission. The reduced energy generates less radiation." ('399 spec. 14:16-23) (emphasis added)
>
> "(a) One can choose a frequency band that is less likely to be used by many transmitters operating at high power near residential areas. This strategy requires a survey of frequency allocations and broadcasting patterns. Preliminary investigation by the inventors revealed that amateur radio is allocated narrow bands at 7 Mhz, 14 Mhz. 21 Mhz, and 28 Mhz, conveniently leaving gaps of 7 Mhz - just right for video." ('399 spec. 27:26-34) (emphasis added)

As the aforementioned sections illustrate, the first electrical signal (i.e., the VIDEO signal) may have a total channel width of 7 Mhz, and the second electrical signal (i.e., the CONTROL signal) may have a channel width of 1 Mhz. As 1 Mhz is less than 7 Mhz, this supports the presently claimed limitation which requires the second channel (i.e., that of the Control signal) to be narrower than the first plurality of channels (i.e., that of the Video signal). Hence, Applicant respectfully submits that claim 71 is fully

supported by the as-filed specification. Withdrawal of the rejection of claim 71 under 35 U.S.C. §112, ¶1 is solicited.

Claims 72 and 77

In regards to claims 72 and 77, the specification allegedly fails to contain written description to provide support for "time-varying infrared light patterns." Applicant respectfully disagrees, and directs the Examiner's attention to col. 32, lines 8-20 (emphasis added), which states:

> "The output of the detector section 103 is a bi-level waveform that corresponds to the received infrared signal. This output is high when the input signal exceeds its long term average, and low otherwise. Noise effects are suppressed by disabling the bi-level signal except when the excursions of the input signal exceed a fixed threshold. The bi-level waveform is fed to the oscillation section to enable or disable the RF carrier, thus generating the desired AM signal at an RF frequency. The output of comparator 122 is set high when the optical flux is greater than the long term average, which is formed using an averaging time of 100 msec, as determined by capacitor 127."

As indicated above, the specification provides explicit support for the second information stream being transmitted as an IR signal with a corresponding bi-level waveform. A bi-level waveform is a time-varying signal. As such, an IR signal with a corresponding bi-level waveform has time-varying infrared light patterns.

New Claims 78-86

New claims 78-86 have been added to more fully recite features of the present invention. Support for new claims 78-86 can be found throughout the specification and drawings. New claims 78-86 are believed to be patentable for at least the reasons set forth with respect to claim 59, on which they depend. Allowance of new claims 78-86 is respectfully solicited.

CONCLUSION

In view of the above amendment and remarks, Applicant respectfully requests that all objections and rejections be withdrawn and that a notice of allowance be forthcoming. The Examiner is invited to contact the undersigned for any reason related to the advancement of this case.

Respectfully submitted,

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